Table 3. Test weights per bushel for selected barley varieties at various Montana locations, 1993-1995.

Variety	Bozeman	Conrad	Havre	Huntley	Moccasin	Sidney	Average
Dryland comparable averages							
Chinook	53.0	51.9	48.8	48.4	48.9	50.4	50.2
Gallatin	53.7	53.4	49.2	49.6	50.7	49.9	51.1
Harrington	52.2	51.5	46.3	47.1	48.1	49.5	49.1
Hector	52.9	52.6	49.3	48.6	50.4	51.1	50.2
Lewis	53.3	53.6	49.3	48.6	50.4	51.1	51.0

Variety	Bozeman	Conrad	Huntley	Sidney	Kalispell (high moisture)	Average
Irrigated comparable averages						
Chinook	53.0	51.8	50.3	48.2	50.4	50.7
Gallatin	54.7	53.4	51.0	48.6	50.5	51.6
Harrington	52.7	51.9	48.4	47.2	49.2	49.9
Hector	52.9	52.7	49.4	47.5	49.8	50.5
Klages	52.3	51.5	49.0	48.7	50.9	50.3
Lewis	54.1	54.1	49.8	49.0	51.3	51.7

tion, Chinook yields 3 percent higher than Harrington or Klages, 14 percent more than Hector, but 1 percent less than Gallatin as shown in Table 2. The test weights of the five varieties are given in Table 3, on the reverse of this sheet. Chinook, grown on dryland, was one pound heavier than Harrington, equal to Hector, but a pound less than Gallatin and Lewis. Chinook, grown under irrigation, had a one-half pound heavier test weight than Harrington, equal in test weight to Hector and Klages. Chinook's test weight was approximately a pound less than Gallatin and Lewis.

Chinook Barley

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Chinook Barley

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'Chinook' barley (PI591823) was developed by the Montana Agricultural Experiment Station. The American Malting Barley Association has recommended Chinook for production as a malting barley in Montana, Idaho, Washington and Oregon. Chinook was named after Chinook, Montana, a small agricultural community in the northcentral part of the state. Foundation seed was released to certified producers in 1995. Chinook is protected under the Plant Variety Protection Act, Title V.

Origin and Development

Chinook was developed from the cross 'Hector'/'Klages'. The first cross was made in 1973 at Bozeman, Montana. In 1989 a single F_{18} plant was selected from the F_9 derived MT140523 selection and advanced to the replicated yield trial tests in 1991. It was selected as a replacement for 'Harrington' as a dryland malting barley.

Agronomic Characteristics

Chinook was released as a malt and feed barley, and is recommended for dryland and irrigated production in all districts. It has high malt extracts, high diastatic power and almost no seed dormancy after harvest. It is a two-rowed, midseason spring barley.

The spike has rough awns, white kernels and the glume awns are equal to the length of the hair-covered glume. The spikes are mid-long, mid-lax and semi-nodding before maturity and nod at maturity, similar to Lewis barley. Chinook grain kernels have adhering, finely-wrinkled hulls and the rachillas have long hairs. Data from the Montana Intrastate Barley Nursery from 1993 to 1995 for approximate heading dates and plant height are summarized in Table 1. Chinook heads approximately one day earlier than Harrington but the same as Gallatin, Hector and Lewis under irrigation. It is three days earlier than Klages. Under irrigation, Chinook is slightly shorter than the other varieties (Table 1). On dryland, Chinook is an inch shorter than Hector, an inch taller than Harrington, and approximately the same height as Gallatin and Lewis.

Data for this publication was supplied by T. K. Blake, P. Hensleigh and the Montana Agricultural Experiment Station Research Centers at Conrad, Havre, Huntley, Kalispell, Moccasin and Sidney.

Disease Resistance

Chinook is susceptible to Russian wheat aphid and powdery mildew, and moderately susceptible to scald. It is moderately resistant to net blotch.

Recommended Areas

Chinook is recommended as a malting barley for dryland and irrigated production in all districts in Montana.

Table 1. Heading date, height and lodging comparison of Chinook and other barley varieties in Montana nurseries (1993-1995).

Variety	Approximate Heading Date I*	Approximate Heading Date D*	Plant Height I*	Plant Height D*	Lodging Percentage
Chinook	6/25	6/28	33	31	37
Gallatin	6/25	6/26	35	31	16
Harrington	6/26	6/28	34	30	36
Hector	6/25	6/28	35	32	60
Lewis	6/25	6/28	34	31	26
Klages	6/28		35		26

*I = Irrigated; D = Dryland

Field Performance

Chinook, grown under dryland conditions, yields 2 percent more grain than Harrington and 5 percent more than Hector. Grown under irriga-

Table 2. Bushels per acre for selected barley varieties at various Montana locations, 1993-1995.

Variety	Bozeman	Conrad	Havre	Huntley	Moccasin	Sidney	Average
			Dryland comparable averages				
Chinook	120.3	85.0	82.4	62.1	62.1	56.0	78.0
Gallatin	114.8	92.8	75.0	62.1	60.2	55.2	76.7
Harrington	119.5	89.2	71.2	61.6	60.7	56.7	76.5
Hector	108.7	88.2	75.8	55.1	61.8	56.4	74.3
Lewis	114.0	93.8	82.7	64.8	60.9	62.3	79.7

Variety	Bozeman	Conrad	Huntley	Sidney	Kalispell (high moisture)	Average
			Irrigated comparable averages			
Chinook	134.9	71.3	94.8	84.7	115.3	100.2
Gallatin	131.2	89.8	90.6	87.1	107.9	101.3
Harrington	119.1	75.4	89.8	87.8	110.9	96.6
Hector	106.7	80.1	76.6	75.0	99.5	87.6
Klages	120.7	78.8	85.1	80.6	121.4	97.3
Lewis	127.5	80.7	93.4	83.0	111.8	99.3